IN THE CLAIMS:

In accordance with the Revised Rules under 37 C.F.R. 1.121, please amend the claims as shown below and indicated as "currently amended." Also shown below are claims that may be original, cancelled, withdrawn, previously presented, new, and not entered.

1. (currently amended) A pipe coupling for joining two portions of a pipe, the pipe coupling comprising:

an inlet portion;

an outlet portion disposed opposite the inlet portion;

a single ~~an~~ intermediate portion disposed between the inlet and outlet portions for ~~providing~~ accommodating both axial and torsional relative movement between the inlet portion and the outlet portion;

the intermediate portion having a plurality of corrugations disposed about a circumference of the pipe coupling, each corrugation having first and second ends;

each corrugation disposed at an angle "a" as measured from a transverse axis of the pipe coupling, said angle substantially perpendicular to a maximum tensile ~~stresses~~ stress (S_n) imposed on the pipe coupling, wherein said maximum tensile stress is defined by the relationship between an axial displacement (S_a) and a torsional displacement (t_{xy}) in the equation $S_n = t_{xy} \sin 2a + S_a \cos^2 a$;

the first and second ends of each corrugation terminating at a transition area where each said end blends with the inlet portion and outlet portion, respectively; and

the transition area forming a smooth curve defined by a second order or third order function, the transition area extending from an axis of each corrugation to either a longitudinal axis of the pipe coupling or an axis perpendicular to the axis of the pipe coupling.

2. (original) The pipe coupling according to claim 1 wherein the smooth curve is in the form of an ellipse.

3. (original) The pipe coupling according to claim 1 wherein the smooth curve is circular.

4. (original) The pipe coupling according to claim 1 wherein a shape of the transition area

forms a smooth curve that is approximated by a circle.

5. (original) The pipe coupling according to claim 1 wherein a shape of the transition area forms a smooth curve that is approximated by one of a plurality of graduated radii.

6. (original) The pipe coupling according to claim 1 wherein a shape of the transition area forms a smooth curve that is approximated by one of a plurality of graduated radii and straight segments.

7. (currently amended) A pipe coupling for joining two portions of a pipe, the pipe coupling comprising:

an inlet portion;

an outlet portion disposed opposite the inlet portion;

a single ~~an~~ intermediate portion disposed between the inlet and outlet portions for ~~providing~~ accommodating both axial and torsional relative movement between the inlet portion and the outlet portion;

the intermediate portion having a plurality of corrugations disposed about a circumference of the pipe coupling;

each corrugation having first and second arms diverging from a common vertex toward the inlet portion and outlet portion, respectively;

each arm disposed at an angle "a" as measured from a transverse axis of the pipe coupling, said angle substantially perpendicular to a maximum tensile ~~stresses~~ stress (S_n) imposed on the pipe coupling, wherein said maximum tensile stress is defined by the relationship between an axial displacement (S_a) and a torsional displacement (t_{xy}) in the equation $S_n = t_{xy} \sin 2a + S_a \cos^2 a$;

each arm terminating at a transition area where each arm of the corrugation blends with the inlet portion and outlet portion, respectively; and

the transition area forming a curve described by a second order or third order function, the curve extending from an axis of each arm to either a longitudinal axis of the pipe coupling or an axis perpendicular to the axis of the pipe coupling.

8. (original) The pipe coupling according to claim 7 wherein each corrugation is parallel to

an adjacent corrugation and wherein the plurality of corrugations are disposed continuously around a circumference of the pipe coupling.

9. (original) The pipe coupling according to claim 7 wherein each corrugation is not parallel to an adjacent corrugation and wherein the plurality of corrugations are disposed continuously around a circumference of the pipe coupling.

10. (original) The pipe coupling according to claim 7 wherein the smooth curve is in the form of an ellipse.

11. (original) The pipe coupling according to claim 7 wherein the smooth curve is circular.

12. (original) The pipe coupling according to claim 7 wherein a shape of the transition area forms a smooth curve that is approximated by a circle.

13. (original) The pipe coupling according to claim 7 wherein a shape of the transition area forms a smooth curve that is approximated by one of a plurality of graduated radii.

14. (original) The pipe coupling according to claim 7 wherein a shape of the transition area forms a smooth curve that is approximated by one of a plurality of graduated radii and straight segments.

15. (new) A pipe coupling for joining two portions of a pipe, the pipe coupling comprising:

an inlet portion;

an outlet portion disposed opposite the inlet portion;

an intermediate portion disposed between the inlet and outlet portions for accommodating both axial and torsional relative movement between the inlet portion and the outlet portion;

the intermediate portion having at least one corrugation band disposed about a circumference of the pipe coupling;

each corrugation band formed of a plurality of arms, each arm connected to an adjacent arm

at a common vertex, each arm diverging from the common vertex along the circumference of the pipe coupling;

the arms diverging at an angle "a" as measured from a transverse axis of the pipe coupling, said angle substantially perpendicular to a maximum tensile stress (S_n) imposed on the pipe coupling; wherein said maximum tensile stress is defined by the relationship between an axial displacement (S_a) and a torsional displacement (t_{xy}) in the equation $S_n = t_{xy} \sin 2a + S_a \cos^2 a$; and

each vertex terminating at a transition area that forms a smooth curve from the vertex to a longitudinal axis of the pipe coupling.

16. (new) A pipe coupling for joining two portions of a pipe, the pipe coupling comprising:

an inlet portion;

an outlet portion disposed opposite the inlet portion;

a single intermediate portion disposed between the inlet and outlet portions for accommodating both axial and torsional relative movement between the inlet portion and the outlet portion;

the intermediate portion having a plurality of corrugations disposed about a circumference of the pipe coupling, each corrugation having first and second ends;

each corrugation disposed at an angle "a" as measured from a transverse axis of the pipe coupling, said angle substantially perpendicular to a maximum tensile stress (S_n) imposed on the pipe coupling, wherein said maximum tensile stress is defined by the relationship between an axial displacement (S_a) and a torsional displacement (t_{xy}) in the equation $S_n = t_{xy} \sin 2a + S_a \cos^2 a$; and

the first and second ends of each corrugation terminating at a transition area where each said end blends with the inlet portion and outlet portion, respectively.

17. (new) A pipe coupling for joining two portions of a pipe, the pipe coupling comprising:

an inlet portion;

an outlet portion disposed opposite the inlet portion;

a single intermediate portion disposed between the inlet and outlet portions for accommodating both axial and torsional relative movement between the inlet portion and the outlet

portion;

the intermediate portion having a plurality of corrugations disposed about a circumference of the pipe coupling;

each corrugation having first and second arms diverging from a common vertex toward the inlet portion and outlet portion, respectively;

each arm disposed at an angle "a" as measured from a transverse axis of the pipe coupling, said angle substantially perpendicular to a maximum tensile stress (S_n) imposed on the pipe coupling, wherein said maximum tensile stress is defined by the relationship between an axial displacement (S_a) and a torsional displacement (t_{xy}) in the equation $S_n = t_{xy} \sin 2a + S_a \cos^2 a$; and

each arm terminating at a transition area where each arm of the corrugation blends with the inlet portion and outlet portion, respectively.